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| EXAMINER |
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BEHARRY, NOEL R

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/537,125 | Applicant(s) VERHAEGH ET AL. | |
| | Examiner NOEL BEHARRY | Art Unit 2446 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06/02/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/02/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to Application No. 10/537,125 filed June 02nd, 2005. The preliminary amendment filed 06/02/2005 has been entered and claims 1-17 have been examined.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

3. Claim 16 and 17 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Specifically, claim 16 depends on claim 1 and appears to recite limitations already claimed in claim 1.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1, 7, 8, 13, and 15-17** are rejected under 35 U.S.C. 102(e) as being anticipated by **Stiles** (US 2002/0069416 A1).

Regarding claim 1,

a broadcast system for broadcasting data includes a hierarchical network of data distributors starting from one central distributor (30 of Fig. 1) through at least one layer of intermediate distributors (21, 26, 31, 41, 51, 61, 71 of Fig. 1) to a plurality of broadcast receivers (24, 25, 42, 52, 63, 72 of Fig. 1) for broadcasting the data (multimedia content) through downstream channels of the network to the plurality of broadcast receivers; at least one distributor (21 & 22 of Fig. 1) hierarchically below the central distributor (30 of Fig. 1) being operative to insert broadcast data (multimedia content) in at least one up-stream channel of the network (DS1 & DS3) towards the central distributor (30 of Fig. 1); the central distributor being arranged to re-distribute broadcast data received via at least one up-stream channel through at least one downstream channel (13 of Fig. 1) of the network. (Par. 0017-0026)

Regarding claim 7,

wherein the broadcast system includes a distribution controller (network operation bridge; 20 of Fig. 1) for controlling insertion of broadcast data in the upstream channels and/or sub-channels of the network. (Par. 0025-0026)

Regarding claim 8,

wherein the distribution controller (network operation bridge; 20 of Fig. 1) is operative to provide data blocks to a plurality of distributors for subsequent insertion in at least one upstream channel and/or sub-channel. (Par. 0025-0026)

Regarding claim 13,

a method of broadcasting data streams through a hierarchical network of data distributors starting from one central distributor (30 of Fig. 1) through at least one layer of intermediate distributors (21, 26, 31, 41, 51, 61, 71 of Fig. 1) to a plurality of broadcast receivers (24, 25, 42, 52, 63, 72 of Fig. 1) for broadcasting the data streams (multimedia content) through downstream channels of the network to the plurality of broadcast receivers; the method including: (Par. 0017-0026)

inserting broadcast data at least one distributor (21 & 22 of Fig. 1) hierarchically below the central distributor (30 of Fig. 1) in at least one up-stream channel (DS1 & DS3) of the network towards the central distributor (30 of Fig. 1); (Par. 0017-0026)

receiving broadcast data via the up-stream channel (DS1 & DS3) of the network; and re-distributing the received broadcast data through at least one downstream channel (13 of Fig. 1) of the network. (Par. 0017-0026)

Regarding claim 15,

the distribution controller (network operation bridge; 20 of Fig. 1) being operative to control synchronized insertion of broadcast data in at least one upstream channel and/or sub-channel of the broadcast network. (Par. 0025-0026)

Regarding claim 16,

the central broadcast data distributor (30 of Fig. 1) being operative to re-broadcast broadcast data (multimedia content) received via at least one up-stream channel (DS1 & DS3) through at least one downstream channel (13 of Fig. 1) of the network towards a plurality of broadcast receivers 24, 25, 42, 52, 63, 72 of Fig. 1). (Par. 0017-0026)

Regarding claim 17,

an intermediate broadcast data distributor controller for use in the broadcast system as claimed in claim 1 that includes a hierarchical network of data distributors starting from one central distributor (30 of Fig. 1) through at least one layer of intermediate broadcast data distributors (21, 26, 31, 41, 51, 61, 71 of Fig. 1) to a plurality of broadcast receivers (24, 25, 42, 52, 63, 72 of Fig. 1) for broadcasting the data streams (multimedia content) through downstream channels (13 of Fig. 1) of the network to the plurality of broadcast receivers; the intermediate broadcast data distributor (21 & 22 of Fig. 1) being operative to insert broadcast data in at least one upstream channel (DS1 & DS3) of the network towards the central distributor (30 of Fig. 1)

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for re-distribution of the broadcast data by the central distributor (30 of Fig. 1) through at least one downstream channel (13 of Fig. 1) of the network. (Par. 0017-0026)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 2-5, 9, 10, 11, and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Stiles** in view of **Seifert** (US 2001/0021999 A1).

Regarding claim 2, Stiles fails to explicitly teach,

wherein data blocks of a title are striped over storage of a plurality of distributors for subsequent insertion as broadcast data in at least one up-stream channel.

However, **Seifert** teaches,

wherein data blocks of a title are striped over storage of a plurality of distributors for subsequent insertion as broadcast data in at least one up-stream channel. (Par. 0044-0045)

It would have been obvious to one of ordinary skilled in the art at the time of the invention to create the invention of **Stiles** to include the above mentioned limitations as taught by **Seifert** for the advantage of saving bandwidth that would have otherwise been needed for the individual transmission to the receivers (Par. 0044).

Regarding claim 3, Stiles fails to explicitly teach,

wherein a plurality of distributors over whose storage the title is striped are operative to insert stored blocks in at least one data channel of the network under control of one common distribution protocol enabling substantially uninterrupted receipt of a stream of blocks from the plurality of distributors by broadcast receivers.

However, **Seifert** teaches,

wherein a plurality of distributors over whose storage the title is striped are operative to insert stored blocks in at least one data channel of the network under control of one common distribution protocol enabling substantially uninterrupted receipt of a stream of blocks from the plurality of distributors by broadcast receivers. (Par. 0044-0045)

It would have been obvious to one of ordinary skilled in the art at the time of the invention to create the invention of **Stiles** to include the above mentioned limitations as taught by **Seifert** for the advantage of saving bandwidth that would have otherwise been needed for the individual transmission to the receivers (Par. 0044).

Regarding claim 4, Stiles fails to explicitly teach,

wherein at least two of the plurality of the distributors are operative to insert stored blocks in a respective sub-channel of one data channel.

However, **Seifert** teaches,

wherein at least two of the plurality of the distributors are operative to insert stored blocks in a respective sub-channel of one data channel. (15, 51 & 61 of Fig. 1)

It would have been obvious to one of ordinary skilled in the art at the time of the invention to create the invention of **Stiles** to include the above mentioned limitations as taught by **Seifert** for the advantage of saving bandwidth that would have otherwise been needed for the individual transmission to the receivers (Par. 0044).

Regarding claim 5, Stiles fails to explicitly teach,

wherein at least two of the plurality of the distributors are operative to insert stored blocks in different data channels of the network.

However, **Seifert** teaches,

wherein at least two of the plurality of the distributors are operative to insert stored blocks in different data channels of the network. (15, 51, 16 & 71 of Fig. 1)

It would have been obvious to one of ordinary skilled in the art at the time of the invention to create the invention of **Stiles** to include the above mentioned limitations as taught by **Seifert** for the advantage of saving bandwidth that would have otherwise been needed for the individual transmission to the receivers (Par. 0044).

Regarding claim 9, Stiles fails to explicitly teach,

wherein at least one broadcast receiver is operative to insert broadcast data in at least one upstream data channel and/or sub-channel of the network.

However, **Seifert** teaches,

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wherein at least one broadcast receiver is operative to insert broadcast data in at least one upstream data channel and/or sub-channel of the network. (Par. 0044-0045)

It would have been obvious to one of ordinary skilled in the art at the time of the invention to create the invention of **Stiles** to include the above mentioned limitations as taught by **Seifert** for the advantage of saving bandwidth that would have otherwise been needed for the individual transmission to the receivers (Par. 0044).

Regarding claim 10, Stiles fails to explicitly teach,

wherein a plurality of broadcast receivers are operative to insert broadcast data in at least one upstream data channel and/or sub-channel of the network; each of the plurality of broadcast receivers including a respective storage; and a title being striped over the storage of the plurality of receivers.

However, **Seifert** teaches,

wherein a plurality of broadcast receivers are operative to insert broadcast data in at least one upstream data channel and/or sub-channel of the network; each of the plurality of broadcast receivers including a respective storage (both receivers E_1 and E_2 are capable of temporarily storing the data unit D_n in respective storage means); and a title being striped over the storage of the plurality of receivers. (Par. 0044-0045)

It would have been obvious to one of ordinary skilled in the art at the time of the invention to create the invention of **Stiles** to include the above mentioned limitations as taught by **Seifert** for the advantage of saving bandwidth that would have otherwise been needed for the individual transmission to the receivers (Par. 0044).

Regarding claim 11,

wherein the storage includes a solid state memory. (hard disc, Par. 0060)

Regarding claim 14, Stiles fails to explicitly teach,

wherein the broadcast receiver is operative to receive data blocks broadcast through at least one downstream channel of the network for subsequent rendering; and to insert broadcast data in at least one up-stream channel of the network towards a central distributor for re-distributing by the central distributor through at least one downstream channel of the network.

However, **Seifert** teaches,

wherein the broadcast receiver is operative to receive data blocks broadcast through at least one downstream channel of the network for subsequent rendering; and to insert broadcast data in at least one up-stream channel of the network towards a central distributor for re-distributing by the central distributor through at least one downstream channel of the network. (Par. 0044-0045)

It would have been obvious to one of ordinary skilled in the art at the time of the invention to create the invention of **Stiles** to include the above mentioned limitations as taught by **Seifert** for the advantage of saving bandwidth that would have otherwise been needed for the individual transmission to the receivers (Par. 0044).

8. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Stiles - Seifert** in view of **NPL: A Fixed-Delay Broadcasting Protocol for Video-on-Demand by Jehan-Francois Paris (Paris hereafter)** (Applicant's IDS dated 06/02/2005).

Regarding claim 6, Stiles – Seifert teaches,

blocks assigned to a highest repetition rate channel being inserted by a first group of distributors (**Stiles**; 26 of Fig. 1); and blocks assigned to a lowest repetition rate channel being inserted by a second group of distributors (**Stiles**; 21 & 22 of Fig. 1); distributors of the first group being hierarchically higher than distributors of the second group. (**Stiles**; Fig. 1)

Stiles - Seifert fails to explicitly teaches,

wherein the common distribution protocol is a near-video-on-demand protocol for distribution of a title through at least two network channels of different repetition rates of blocks assigned to the channel.

However, **Paris** teaches,

wherein the common distribution protocol is a near-video-on-demand protocol for distribution of a title through at least two network channels of different repetition rates of blocks assigned to the channel. (Page 419 Section III – Page 420, 2nd Par.)

It would have been obvious to one of ordinary skilled in the art at the time of the invention to create the invention of **Stiles - Seifert** to include the above mentioned limitations as taught by **Paris** for the advantage of lower bandwidth requirements and more efficient transfer of the first few minutes of the video (Page 1 Section I).

9. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Stiles** in view of **Buehl et al. (Buehl hereafter)** (US 2002/0104093 A1).

Regarding claim 12, Stiles fails to explicitly teach,

wherein the intermediate distributors are operative to split and/or filter the broadcast data towards the broadcast receivers.

However, **Buehl** teaches,

wherein the intermediate distributors are operative to filter the broadcast data towards the broadcast receivers. (Par. 0041)

It would have been obvious to one of ordinary skilled in the art at the time of the invention to create the invention of **Stiles** to include the above mentioned limitations as taught by **Buehl** for the advantage of making the content available on servers that server areas with a specified population Par. 0041).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NOEL BEHARRY whose telephone number is (571)270-5630. The examiner can normally be reached on M-T 10-2.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. B./

Examiner, Art Unit 2446

/Benjamin R Bruckart/

Examiner, Art Unit 2446